

Technical Memorandum



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Subject: King County Surface Water Design Manual
(KCSWDM)
Summary of Major Changes between 1998
KCSWDM and 2009 KCSWDM
Project No.: 31301B

Introduction

The City of Kenmore adopted the 1998 King County Surface Water Design Manual (KCSWDM) with modifications as the standard for stormwater runoff control. The City's Phase 2 Municipal NPDES Stormwater Permit requires the city to adopt the 2005 Stormwater Manual for Western Washington or an equivalent manual. The 2009 KCSWDM has been approved as an equivalent manual and the City proposes to adopt this manual to meet their Phase 2 Municipal NPDES Stormwater Permit requirements. Following is a summary of major changes between the 1998 KCSWDM, which the City currently uses, and the 2009 KCSWDM.

King County Surface Water Design Manual (KCSWDM)

Since the 1998 KCSWDM, King County has updated the SWDM twice; in 2005 and 2009. Most of the significant updates were changes needed to obtain Phase 1 Municipal NPDES Permit equivalency to the 2005 Stormwater Manual for Western Washington. Major changes include:

Drainage Review

- Thresholds lowered to 2,000 square feet. (KMC current threshold is 500 square feet.)

Flow Control

- Threshold lowered to 2,000 square feet.
- Threshold includes Replaced Impervious Surface.
- Retroactive to require flow control for new and replaced impervious surface added since January 8, 2001 (the effective date of the ESA listing).
- Requires duration control (Level 2 per KMC) as default standard.

- Establishes new predevelopment assumption of “historic site conditions” (forested) rather than “existing site conditions”.
- Eliminated the use of Wetlands for detention and added DOE’s Wetland Hydrology Protection Guidelines.
- Requires application of “flow control BMPs” to proposed impervious surfaces.

Flow Control BMPs

- Requires Flow Control BMPs for all projects in full drainage review.
- Flow Control BMPs are Low Impact Development (LID)-type measures that attenuate storm volumes onsite and include:
 - Dispersion
 - Infiltration
 - Rain Gardens
 - Permeable Pavement
 - Rainwater Harvesting
 - Vegetated Roof
- All projects are required to apply Flow Control BMPs to the runoff from a portion of the impervious surface (10-20%) to attenuate volumes on individual parcels.
- The size of flow control facility (detention) can be reduced because the flows are attenuated onsite.
- Maintenance standards are included and maintenance is required by code and covenant.

Water Quality

- Changes “Resource Stream Water Quality Treatment” to “Enhanced Basic Water Quality Treatment” and changes the application based on land-use instead of receiving stream. Enhanced Basic treatment required for Industrial, Commercial, Highways, Collector Roads and high-density residential development. Current KMC has made this modification.
- A new requirement for Downstream Analysis (Chapter 2) related to identified water quality problems. This provides a mechanism for potential additional mitigation needed to comply with Section S4F of the Municipal Stormwater Permit.